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ABSTRACT

This study was designed to study the effect of locus of control on the career maturity of a cross-section of age groups. The effects of race and sex were also studied. The Career Development Responsibility Scale (Thomas, 1974), the Career Maturity Inventory Attitude Scale (Crites, 1973), and a measure of socioeconomic status were employed to collect the data. The latter variable was used as a covariable. The analysis of covariance produced significant main effects for race and locus of control. The mean maturity score was significantly greater for whites. Externals were significantly less mature in their career attitudes. (Author)

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A DEVELOPMENTAL STUDY OF THE MEDIATING EFFECTS OF LOCUS OF CONTROL ON CAREER MATURITY[1]

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How can you stimulate the development of mature career attitudes? This question has increasingly become a matter of concern in educational circles. Recent studies measuring the effects of career education programs (e.g. Omvig, et al, 1975) typically use a measure of career maturity as one program outcome. Super (1953) defines career maturity as a point on the continuum of vocational development, and this definition seems most viable for researchers concerned with the developmental aspects of this variable. Since the development of career maturity seems to be emerging as a major outcome of various career programs, knowledge of concomitant variables will assist curriculum developers in enhancing this behavior.

Locus of control of reinforcement (Rotter, 1966), or perceived source of power or influence in one's life, would appear to be related to the growth or the acquisition of mature career attitudes. Rotter (1966) noted that one of the determinants of the generalized expectancy variable "is the degree to which the individual perceives that reward follows from, or is contingent upon, his own behavior or attitudes (internal) versus the degree to which controlled by forces outside himself (external)." This generalized expectancy variable has been found to be domain specific (e.g. Bradley and Gaa, 1973). High internality has been shown to be related to efforts to acquire information concerning future goals (e.g., Seeman and Evans, 1962), retaining information concerning future goals (Seeman, 1963), utilizing information (Phares, 1968) and are more self

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directed in seeking information about jobs when unemployed (Tiffany et al., 1970). In addition, high internality has been found to be related to mature career attitudes for ninth grade students (Thomas, 1974b).

Career development theorists describe the degree to which an individual has progressed in his career development in terms of career maturity, i.e., the maturity of attitudes critical to realistic career decision-making (Crites, 1973). Acquisition of these mature career attitudes is primarily dependent on acquiring knowledge of relevant information about one's self and occupations. Based on the above research findings, it was hypothesized that the locus of control of reinforcement construct would mediate the development of mature career attitudes.

Objectives

The primary objective of the study was to determine the effect of locus of control on the career maturity of a cross section of age groups. More specifically stated, the objective was to determine the degree to which locus of control of reinforcement as measured by the Career Development Responsibility (CDR) scale (Thomas, 1974b) mediates the development of mature career attitudes as measured by the Career Maturity Inventory (CMI) attitude scale (Crites, 1973). In addition, the effects of sex and race on career maturity were sought.

Instrumentation

The instruments used in this study were the Career Maturity Inventory (CMI) (Crites, 1973), the Career Development Responsibility (CDR) scale (Thomas, 1974b), and a personal data sheet.

The Career Maturity Inventory attitude scale was developed by Crites to measure the maturity of attitudes that are critical in realistic career decision-making. These attitudes are considered to be of a developmental nature from late childhood into early adulthood. Internal consistency coefficients reported by the instrument developed averaged .74 for the norm group samples from grades six through twelve. This coefficient was identical to the values obtained from

the current sample. Also reported was a coefficient of stability with a test-retest interval of one year, the r value being .71, which was considered adequate considering the developmental aspects of the variable. Validity of the instrument is based on content- and criterion-related variables.

The Career Development Responsibility scale was developed to measure the degree to which reinforcements in terms of success in career preparation-acquisition-performance situations are considered to be contingent upon the subject's own behavior. The internal consistency was found to be .67, which is approximately equivalent to a similar instrument measuring children's beliefs in their own control of reinforcements in intellectual academic achievement -situations (Crandall et al., 1965). Content- and criterion-related validity were also established for the instrument (Thomas, 1974b).

Race, sex, and grade in school and a measure of socioeconomic status were obtained from a personal data sheet. The latter was derived from the occupation held by the head of the household.

Methods

Scores for each subject were computed for the CDR and CMI using weights of zero and one for the "correct" response. For the CMI, the response pattern being true-false, the response indicating maturity or adult behavior was weighted as one. The CDR was scored by assigning a weight of one to external response and zero to internal response; thus a high score was indicative of the belief in external control of one's career development.

Factorial analysis of covariance (Winer, 1962) was used to obtain the main effects of grade, race, sex, and locus of control. For the latter independent variable, subjects were divided into high (externals), middle and low (internals) based on their CDR scores. The Newman-Kuels technique of multiple comparisons was employed where significant main effects or interactions involving more than two means were observed. Socioeconomic status (SES) was employed

as a covariate. This covariate was selected because of the differential effect of sex group membership on the relationship of SES with locus of control as measured both by the CDR and the IAR (Thomas, 1974a).

Data Source

Data were obtained on the two instruments and the information sheet from students enrolled in three secondary schools in a Florida county in which a cross section of socioeconomic levels was represented. A random sample of intact classes stratified by grade from the type of class to which each school assigned students the most randomly was obtained. Two classes per grade were obtained from each school.

Data were collected during regular class periods in early May of 1975. Complete data were obtained for 281 students.

Results and Discussion

The main effects of locus of control and race were significant ($p < .001$). Neither the main effects for sex and grade nor the 3-way or higher interactions were significant. One 2-way interaction, grade x race, was significant at the .05 level. The Newman-Kuels test indicated that all locus of control groups differed significantly ($p < .01$) with the externals having the least mature career attitudes. The means for the external, middle and internal groups were 26.9, 30.5, and 32.9 respectively. Blacks were less mature in their career attitudes than were whites, the means being 26.2 and 30.2 respectively.

As shown by the display of marginal means in Table 1, the level of career maturity was differentially affected depending on the respondents' grade and race. Marginal means for all white grade groups differed significantly ($p < .05$) from all black grade groups, In addition, the mean career maturity score for ninth grade black groups differed significantly ($p < .05$) from that of all other black grade groups. Thus the interaction of grade and race is the result of the absence of significant differences among the white grade groups. For a

developmental variable like career maturity one would expect the mean score to be higher for each succeeding grade level. However, this was not found for white students in this study. This could indicate that whites with immature career attitudes were not dropping out of school or that a sampling error occurred for the higher grades. The researchers anticipated that the use of socioeconomic status as a covariate would reduce the effect of race and that there would be a significant interaction between grade and locus of control. The latter would have given a stronger case for the mediating effects of the locus of control variable on career maturity.

Conclusions

The results of this study do not agree with previous research regarding differences between males and females (Smith and Herr,1972) and among the various grade groups (e.g., Crites, 1965). Locus of control and race appear to have a much greater effect on the development of mature career attitudes than grade or sex when socioeconomic status is held constant. Thus, a possible explanation of grade and sex differences obtained in previous cross-sectional studies could have been the disproportional dropping out of school by external males.

The sizeable mean difference between internals and externals (six raw score points) gives credence to the mediating effect of the locus of control dimension on career maturity. The interaction between the locus of control and grade anticipated by the researchers was not obtained. Thus, the degree to which mature career attitudes are mediated by or develop concurrently with career development responsibility was not established by this study. Cross-sectional studies in which the expected increase in career maturity for the various grade levels is observed, longitudinal studies, or experimental studies in which locus of control in the career development domain is manipulated,

will be required to establish the extent to which the CDR variable mediates the development of career maturity.

The higher level of career maturity exhibited by internals and the absence of a significant interaction between locus of control and grade gives rise to the question of the age at which the difference in career maturity between internals and externals develops. It appears that future research should be directed at grade levels lower than those included in the present study.

It also appears that additional studies should include the race, SES, and sex variables. The effect of race on career maturity is consistent with previous results (Thomas, 1974a) on a sample obtained in a Midwestern school. Thus, the same suppressive effect on the development of mature career attitudes by black students is operative in different geographic locations. Because race and SES are typically confounded, it is considered desirable to remove the effects of SES on the dependent variable. Although previous studies (e.g., Thomas, 1974b) have not shown significant relationships between career maturity and SES, it was a significant covariate in the present study.

The differences in career maturity between sex groups is consistently low although sometimes significant (e.g., Smith and Herr, 1972). However, it would not be advisable to disregard sex in the study of career maturity. To do so would eliminate the possibility of identifying sex differences that may exist in the development of career maturity.

Any reluctance that the researchers had in regard to manipulating locus of control in the career development domain as an experimental variable has been eliminated by research showing that locus of control is a domain specific (e.g., Bradley and Gaa, 1973) multidimensional construct (e.g., Stephens, 1973). Thus, changes in personal efficacy in the career development domain should not affect the defensive external in other domains. Defensive externals place blame for their failure on external forces such as fate, luck,

and chance. Future research planned by the researchers to explore the questions raised by this study will include experimental and longitudinal designs.

TABLE 1. Marginal Means of CMI Scores by Grade x Race Groups

Grade Groups	White (1)	Black (2)
9 (1)	33.1	22.9
	(12, 22, 32, 42)*	(11, 21, 22, 31, 32, 41, 42)
10 (2)	32.3	26.0
	(12, 21, 32, 42)	(11, 12, 21, 31, 41)
11 (3)	33.2	27.7
	(12, 22, 32, 42)	(11, 12, 21, 31, 41)
12 (4)	33.5	26.6
	(12, 22, 32, 42)	(11, 12, 21, 31, 41)

*Parentheses indicate significant differences ($p < .05$) between grade x sex group means, e.g., ninth grade whites differ significantly from ninth grade blacks (12), tenth grade blacks (22), eleventh grade blacks (32), and twelfth grade blacks (42).

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